

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Claim 1 (currently amended): A motor comprising:
a stationary shaft;
a hub comprising a rotor, wherein the hub is rotatable about the central axis with respect to the shaft;

a thrust plate coupled to the shaft; and
a counter plate coupled to the hub and having the shaft extending therethrough, the counter plate and the thrust plate defining at least a portion of a fluid dynamic bearing, wherein at least a portion of the counter plate and the thrust plate form an axially oriented capillary seal therebetween, wherein:

the thrust plate further comprises an upper surface at least partially facing the counter plate, a lower surface at least partially facing the hub, and a passage formed between the upper and lower surfaces and at least partially aligning with the capillary seal, and
the hub further comprises a fluid re-circulation hole formed therein at least partially aligning with the passage formed in the thrust plate.

Claim 2 (original): The motor of claim 1 further comprising
a base having a first end of the stationary shaft coupled thereto; and
a cover plate coupled to base and having a second end of the stationary shaft coupled thereto.

Claim 3 (original): The motor of claim 1, wherein the thrust plate further comprises:
an outer surface facing and diverging from an inner surface of the counter plate.

Claims 4-5 (cancelled)

Claim 6 (currently amended): The motor of claim [[4]] 1, wherein at least one of the hub and thrust plate further comprises:

a plurality of pumping grooves formed therein radially outward of the passage.

Claim 7 (currently amended): The motor of claim 1 further comprising:
an asymmetric seal comprising a grooved pumping seal near a lower end of the shaft and the capillary seal near an upper end of the shaft; shaft.

Claim 8 (original): The motor of claim 1, wherein the thrust plate further comprises:
a cylindrical portion coupled to the shaft; and a flange extending radially outward from the cylindrical portion.

Claim 9 (original): The motor of claim 8, wherein the flange of the thrust plate further comprises:

an upper surface at least partially facing a bottom surface of the counter plate; and a lower surface facing a working surface of the hub.

Claim 10 (original): The motor of claim 1 further comprising
a hydrodynamic bearing defined between the hub and the shaft.

Claim 11 (cancelled)

Claim 12 (currently amended): A motor comprising:
a base;
a cover coupled to the base;
a stationary shaft coupled to the base at a first end and coupled to the cover at a second end;
a hub comprising a rotor, wherein the hub is rotatable about the central axis with respect to the shaft;

a fluid dynamic bearing defined the hub with the shaft;
a thrust plate coupled to the shaft;
a counter plate coupled to the hub;
a divergent capillary seal defined between the thrust plate and the counter plate, wherein the capillary seal is defined between an outer surface of the thrust plate and an inner surface of the counter plate; and
a stator coaxial with the shaft for rotating the hub relative to the shaft.

Claim 13 (cancelled)

Claim 14 (currently amended): The motor of claim [[13]] 12, wherein at least one of the outer diameter surface of the thrust plate and the inner diameter surface of the counter plate is oriented at an acute angle relative to the second end of the shaft.

Claim 15 (currently amended): The motor of claim [[13]] 12, wherein an interface between an outer surface of the thrust plate and an inner surface of the counter plate is flared.

Claim 16 (original): The motor of claim 12, wherein the thrust plate further comprises:
a cylindrical portion coupled to the shaft; and
a flange extending radially outward from the cylindrical portion.

Claim 17 (original): The motor of claim 16, wherein the flange of the thrust plate further comprises:

an upper surface at least partially facing a bottom surface of the counter plate;
a lower surface facing a working surface of the hub; and
a passage formed between the upper surface and lower surface; the passage at least partially aligning with the capillary seal.

Claim 18 (currently amended): The motor of claim 17, wherein the flange of the thrust plate further comprises:

at least one re-circulation hole formed in the hub and at least partially aligned with the passage.

Claim 19 (original): The motor of claim 17, wherein at least one of the hub and thrust plate further comprises:

a plurality of pumping grooves formed therein radially outward of the passage.

Claims 20-23 (cancelled)

Claim 24 (new): A motor comprising:

a stationary shaft;
a hub comprising a rotor, wherein the hub is rotatable about the central axis with respect to the shaft;

a thrust plate coupled to the shaft; and
a counter plate coupled to the hub and having the shaft extending therethrough, the counter plate and the thrust plate defining at least a portion of a fluid dynamic bearing, wherein at least a portion of the counter plate and the thrust plate form an axially oriented capillary seal therebetween, and wherein the thrust plate further comprises an outer surface facing and diverging from an inner surface of the counter plate.

Claim 25 (new): The motor of claim 24, wherein the thrust plate further comprises an upper surface at least partially facing the counter plate, a lower surface at least partially facing the hub, and a passage formed between the upper and lower surfaces and at least partially aligning with the capillary seal.

Claim 26 (new): The motor of claim 25, wherein the hub further comprises a fluid re-circulation hole formed therein at least partially aligning with the passage formed in the thrust plate.